DOCUMENT RESUME

ED 169 409 CG 013 339

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TITLE Equals: An Annotated Bibliography to Assist Elementary and Secondary School Teachers in Sex-Fair Counseling and Instruction.
INSTITUTION California Univ., Berkeley. Lawrence Hall of Science.
SPONS AGENCY Office of Education (DHEW), Washington, D.C.
PUB DATE Aug 77
NOTE 34p.

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Academic Achievement; *Career Opportunities; *Class Activities; Counselors; *Educational Resources; Elementary Secondary Education; Guidance Counseling; *Instructional Materials; *Sex Differences; *Sex Fairness; Teachers

ABSTRACT

This collection of annotated references is designed to provide elementary and secondary school teachers with sex-fair resources useful in curriculum instructional programs and counseling and guidance services. The materials reviewed address the following areas of concern: (1) sex discrimination and roles; (2) motivation; (3) sex differences in math achievement and attitudes toward science courses and careers, including a historical review of female mathematicians; (4) sex-fair counseling; and (5) career opportunities for women in skilled trades, science, and engineering. (HLM)

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ED169409

EQUALS

An Annotated Bibliography to Assist Elementary and Secondary School Teachers in Sex-fair Counseling and Instruction

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Compiled for Equals Institute
by Valerie Wheat
August 1977

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Supported by a grant from the U.S. Office of Education, Title IV of the Civil Rights Act

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Golden, Gloria and Lisa Hunter. In All Fairness: A Handbook on Sex Role Bias in the Schools. 1974, Far West Laboratory for Educational Research and Development, 1855 Folsom, San Francisco, CA 94103. 95p. $5 (pbk) or free with film rental. Distributed by University of California Extension Media Center, Berkeley, CA 94720. (EMC is at present involved in a legal dispute and prohibited from distributing the films.)

The handbook comes with three films, each demonstrating one kind of stereotyping: physical ("Hey, What About Us?"), social-emotional ("I Is For Important") and intellectual-career ("Anything They Want To Be"). Includes film transcripts, suggested activities, a fine section on research interpretation and comprehensive summaries of research on sex differences.

Grambs, Jean D., ed. Teaching About Women in the Social Studies: Concepts, Methods, and Materials. Bulletin 48, 1976. National Council for the Social Studies, 1515 Wilson Boulevard, Suite 101, Arlington, VA 22209. 117p. $5.95 (pbk).

Most of the material relates specifically to social studies, but two universal chapters are "Treatment of the Sexes in Instructional Materials: Guidelines for Evaluation" by Patrick Ferguson and Lois C. Smith and "Nonsexist Teaching," a values clarification approach by David and Myra Sadker.

Growing Free: Ways to Help Children Overcome Sex-Role Stereotypes. 1976, Association for Childhood Education International, 3615 Wisconsin Avenue, N.W., Washington, D.C. 20016. 32p. $1.

Articles reprinted from Childhood Education and assorted resource lists. Shirley McCune's "Building Positive Futures" takes a moderate view and suggests evaluation and action steps, while "Reinventing Sex Roles in the Early Childhood Setting" by Patrick Lee has an original slant.

Guttentag, Marcia and Helen Bray. Undoing Sex Stereotypes. 1977, McGraw-Hill. 334p. $5.95 (pbk).

The authors did a field survey of more than 400 schoolchildren revealing arbitrary sex stereotyping. They have developed a 6-week intervention program and share their methods of testing and curriculum development and experiences in working with teachers.

Harrison, Barbara Grizzuti. Unlearning the Lie: Sexism in School. 1973, Liveright, $6.95 (hdbk); Morrow, $2.95 (pbk).

A gutsy, real life account of the impact of a Sex-Roles Committee on the interracial, liberal Woodward School in Brooklyn. "Really this book is not just about curriculum changes, or even about evolving social awareness and new teaching methods, or new ways of teachers' relating to boys and to girls (though it is about all of these things too); it is about the way one institution reacted to the demand for change; the way black women and white women worked together, or pulled apart; the way feminist women interacted with feminist men; and it is about tensions and conflicts between parents and professional staff. It is about the way women and men of goodwill—and their children—wrestled with that angel, change."

SEX DISCRIMINATION IN SCHOOL AND SOCIETY

Brophy, Jere E. and Thomas L. Godd. "Feminization of American Elementary Schools," Phi Delta Kappan 54:8 (April 1973), p. 564-66.
Reviews the research on teacher interaction with male and female students. Conclusion: change is needed in stereotyped sex roles and the passive student role, not simply in number of men or women teachers.

Carlson, Dale. Girls Are Equal Too: The Women's Movement for Teenagers. 1975, Atheneum. 146p. $6.95 (hdbk).
In a light, non-dogmatic manner, the author discusses how women have been discriminated against, what the women's movement has done, and how girls can deal with sexism.

DeCrow, Karen. The Young Woman's Guide to Liberation. 1971, Pegasus Books/ Bobbs-Merrill. 200p. $5 (pbk).
Well organized summary of all phases of sex stereotyping with devastating examples from advertising and news media. A former president of the National Organization of Women, DeCrow was also a textbook editor and reveals all in the chapter "Look Jane, Look! See Dick Run and Jump! Admire Him!"

Federbush, Marcia. Let Them Aspire. 4th ed, November 1973. KNOW, Inc., Box 86031, Pittsburgh, PA 15221. 106p. $3 (unbound).
Action proposal submitted by the Committee to Eliminate Sex Discrimination in the Ann Arbor, Michigan Public Schools. A grab bag of reports, correspondence, bibliographies on topics from textbooks to athletics.

Feminists on Children's Media. Little Miss Muffet Fights Back, 1974 rev. ed. From Feminist Book Mart, P.O. Box 149, Whitestone, NY 11357. 62p. $1, bulk rates on request.
This classic bibliography evaluates 300 children's books for sexism and gives information on dealing with publishers or getting your own book published.

Frazier, Nancy and Myra P. Sadker. Sexism in School and Society. 1973, Harper and Row. 215p. $4.95 (pbk).
One of the earlier reports of sexism in education - elementary, high school and university. Loaded with ammunition and written especially for teachers.

Gersoni-Stavn, Diane, ed. Sexism and Youth. 1974, Bowker. 464p. $10.95 (hdbk).
Collection of short, sassy, non-academic pieces on sexism in school and society. Parts 3 and 4 are especially valuable, containing many landmark studies of discrimination in textbooks and the media. Well-known names abound: Lenore Weitzman, Florence Howe, Feminists on Children's Media, etc. Note Josephine Mlinar's "Sex Stereotypes in Mathematics and Science Textbooks for Elementary and Junior High Schools," p. 367-376.

Pottker, Janice and Andrew Fishel. Sex Bias in the Schools: The Research Evidence. 1976, Fairleigh Dickinson University Press, P.O. Box 421, Cranbury, NJ 08512. 571p. $27.50 (hdbk).

Articles covering preschool, elementary, secondary, and higher education, role formation, and counseling. Some reprints from professional journals and some new material, with varying degrees of usefulness. One of the few anthologies to include a section on teacher power with articles on women principles, and "Occupational Sex Stereotypes in Elementary-School Readers" by Janice Pottker, "Sex Stereotyping in Elementary-School Mathematics Textbooks" by Winifred Tom Jay, and the fascinating "Sex-Typing and Politicization in Children's Attitudes" by Lynne Iglitzin.

Saario, Terry N., Carol N. Jacklin and Carol K. Tittle. "Sex Role Stereotyping in the Public Schools," Harvard Educational Review 43:3 (August 1973), p. 386-416.

Documentation and discussion of sex role stereotyping in elementary school basal readers, educational achievement tests, and differential curricular requirements for males and females.

Sex Discrimination in Education Newsletter. Dept. of Psychology, University of Michigan, Ann Arbor, MI 48109. Bi-monthly, $5/indiv.; $10/institution.

Book reviews, news, and general current awareness. Special issues have included 1:3 (February 1976) on Title IX and self-evaluation of your school, 1:4 re-entry women, 1:5/6 on school sports.

Sprung, Barbara. Non-Sexist Education for Young Children: A Practical Guide. 1975, Citation Press. From Women's Action Alliance, 370 Lexington Avenue, New York, NY 10017. 115p. $3.25 (pbk).

The experience of demonstration child care center staff in creating non-sexist environments. Though it deals with younger children, the book is interesting because of the consciousness the teachers developed of their own behavior and how they involved the parents and community. Includes list of non-sexist resources, their sample units on jobs, families, etc. Bibliographies and the materials they developed (sex fair photo sets and figures of community workers for example) available from WAA.

Stacey, Judith, Susan Béreaud and Joan Daniels, eds. And Jill Came Tumbling After: Sexism in American Education. 1974, Dell. 461p. $1.75 (pbk).

Well organized collection of effective articles written from a feminist point of view and with humor. Sections on "No Women Geniuses?" "Pink and Blue: The Color Line," "Down with Dick and Jane," "Are Colleges Fit for Women?" "View from the Desk," and "The Feminist Response." Note "Sex Problems of School Math Books" by Marsha Federbush, p. 178-184.

Howe, Florence. "Sexism and the Aspirations of Women," Phi Delta Kappan 55:2 (October 1973), p. 99-104. Special issue on women and education. Also, see "Women and Educational Testing" by Carol K. Tittle, p. 118-119.

An inspiring talk by one of the founders of the Feminist Press about the history of education for women, the crucial role of women teachers, and the specific goals of women's studies.

Howard, Suzanne. Liberating Our Children, Ourselves: A Handbook of Women's Studies Course Materials for Teacher Educators. 1975, American Association of University Women. AAUW Sales Office, 2401 Virginia Avenue, N.W., Washington, D.C. 20037. 58p. $1.50 or bulk rates.

Dedicated to the idea that sexism in education is a problem of the teaching profession. Includes a rationale for women's studies, sample course outline and suggested research projects, and excellent 16p. reading list. Could be a good resource for legitimizing and organizing teacher training in your school.

_____. Why Aren't Women Administering Our Schools? 1975. From National Council of Administrative Women in Education, 1815 Fort Myer Drive North, Arlington, VA 22209. 53p. $3 (pbk). In same series, Sex Differentiation in Public School Administration by Patricia Ann Schmuck, 119p., $4 (pbk).

The status of women public school teachers, the sociopsychological factors hindering the promotion of women to administrative positions, and recommendations for remedial action. "In 1975, approximately 75 of the nation's 17,000 school districts are directed by female superintendents of schools. Two percent of the nation's secondary school principals are women; eighteen percent of the nation's elementary school principals are women."

Jacoby, Susan. "Altering Sexism in the Classroom," Learning 1:6 (April 1973), p. 62-67. Also "Sexism in American Schools? Yes...But..." p. 60-61.

Assessment of the impact women's advocates have had or are likely to have on textbook publishers, with quotes from publishing representatives. Details of successful strategies and activities that particular teachers have used and how they are making their own non-sexist curriculum materials.

Johnson, Laurie Olsen. Nonsexist Curricular Materials for Elementary Schools. 1974. Feminist Press, Box 334, Old Westbury, NY 11568. 97p. looseleaf. $5.

Packet of good things: checklists and consciousness-raising exercises, classroom activities and student handbook for discovering sex role stereotypes, statistics on women in the U.S., a Susan B. Anthony Day kit, bibliographies, and more.

National Project on Women in Education. "Toward a Nonsexist School," American Education 13:3 (April 1977), p. 7-9. Also "What To Do About Sex Bias in the Curriculum" by Adeline Naiman, p. 10-11.

Summarizes what progress has been made in establishing guidelines for non-sexist materials in teacher awareness. List of action suggestions for parents who want to become involved. Naiman succinctly states the questions facing school boards and communities and recommends steps for administrators.

Women on Words and Images. Dick and Jane as Victims: Sex Stereotyping in Children's Readers. July 1975 ed. From WOWI, P.O. Box 2163, Princeton, NJ 08540. 80p. $2.50 each or $2/25 copies or more. Slide and tape presentation, 25 minutes, rental: $35; sale: $300. Also Channeling Children: Sex Stereotyping on Prime Time TV booklet ($2.50 each or $1.75/10 or more copies).

New edition contains the classic 1972 study of 134 elementary school readers from 14 major publishers and a 1975 update evaluating 83 new readers published since 1972. In the original study, ratio of boy-centered to girl-centered stories 5:2, male biographies to female 6:1, men in 147 occupations and women in only 26. There are some new stories but a continued imbalance in 1975: boy-centered 7:2, male occupations 3:1. Least impressive revision: "She is just like a girl. She gives up" used to be said by Mark about sister Janet, now Pedro refers to Nina!

Suelzle, Marijean. "A Questionnaire: Sexism in American Schools," Learning 1:1 (November 1972), p. 81-4. Also "Sexism Yes" by Diane Divoky and "Sexism No" by Sheila Johnson, p. 78-80.

4p. questionnaire for teachers on sexism and two views of whether women teachers are up against a double standard in the school systems.

Tittle, Carol K., Karen McCarthy and Jane F. Steckler. Women and Educational Testing: A Selective Review of the Research Literature and Testing Practices. 1974. From Educational Testing Service, Princeton, NJ 08540, 83p.+ $4 (pbk).

Examines discrimination against women and minorities in educational testing through reinforcement of stereotyping and restriction of individual choice. Achievement and vocational tests are evaluated.

U'Ren, Marjorie B. "The Image of Women in Textbooks" in Woman in Sexist Society: Studies in Power and Powerlessness (Vivian Gornick and Barbara K. Moran, eds. Basic Books) p. 218-225.

A survey of California reading texts for 2nd-6th grades in which 75% of the stories have main characters who are male. The one working female shown is a scientist with this caption: "The project the young woman is working on is not her own idea. She was assigned to work on it. And she has been using her scientific knowledge to help develop a useful, safe drug which her company can then produce and sell. As an employee working on someone else's idea, she is typical of thousands of scientists working in industry today."

Verheyden-Hilliard, Mary Ellen. A Handbook for Workshops on Sex Equality in Education. 1976. From SEGO Project, American Personnel and Guidance Association, 1607 New Hampshire Avenue, N.W., Washington, D.C. 20009. 79p. Single copy free.

How to organize and lead a workshop on sex equality in the schools. Includes a comprehensive annotated resource guide.

Weitzman, Lenore J. and Diane Rizzo. Biased Textbooks: A Research Perspective. 1975. Resource Center on Sex Roles in Education, 1201 16th Street, N.W., Washington, D.C. 20036. 15p. $1 prepaid.

_____. "Sex Bias in Textbooks," Today's Education 64:1 (Jan-Feb 1975), p. 49+52.

Analysis of the "latent" content of the most widely used textbook series in science, math, reading, spelling and social studies; and how to effect change.

Teachers' Centers Exchange Occasional Papers No. 1 (April 1977). Far West Laboratory for Educational Research and Development, 1855 Folsom Street, San Francisco, CA 94103. In press, Essays on Teachers' Centers edited by Kathleen Devaney, (100p., $6) and Teachers' Centers Exchange Directory by Jeanne Lance and Ruth Kreitzman (228p., $6.50).

Women's studies:

Feminist Book Mart, P.O. Box 149, Whitestone, NY 11357.
Distributor of books and pamplets, children's books, bibliographies. They publish a catalog and a bibliography Girls and Boys...Together (1974, $1).

KNOW, Inc., P.O. Box 86031, Pittsburgh, PA 15221.
Publisher and distributor of materials about women, specializing in reprints of articles and monographs. Access to much fugitive material and at very reasonable prices.

Media Report to Women Newsletter. Women's Institute for Freedom of the Press, 3306 Ross Place, N.W., Washington, D.C. 20008. Monthly, $15/yr. or $10 prepaid. 1977 Media Report to Women Index/Directory. 59p. $8.
The newsletter lavishly reports on developments in women's organizations and issues, legal and government battles, women in the arts and media and much more. The annual directory condenses all this information.

Ms. Magazine, 370 Lexington Avenue, New York, NY 10017. Subscriptions from 123 Garden Street, Marion, OH 43302. Monthly, $10/yr.
Sections on "Found Women" such as astronomer Caroline Herschel and Audubon illustrator Maria Martin, "Stories for Free Children," news, reviews and fiction.

New Woman's Survival Sourcebook, edited by Kirsten Grimstad and Susan Rennie. 1975, Knopf. 245p. $5 (pbk).
Oversize catalog format with lots of graphics and photos complementing the complete coverage of women and work, health, literature, communications, education, etc. The editors are also involved in publishing Chrysalis, a sumptuous magazine of women's culture. From Woman's Building, 1727 North Spring Street, Los Angeles, CA 90012. Quarterly, $10/yr; $15/institutions; $3/single copy.

WIND (Women in Distribution, Inc.), P.O. Box 8858, Washington, D.C. 20003.
Distribute over 300 titles, with many from small, alternative presses. Their catalogs are informative and attractive with interesting photos and drawings.

Non-sexist education:

Artel, Linda and Susan Wengraf, eds. Positive Images: An Evaluative Guide to 400 Non-Sexist Films for Young People. 1976. Booklegger Press, 555 29th Street, San Francisco, CA 94131. 167p. $5 prepaid.

A great resource for finding out more about a particular film or for planning a program around a topic (there's an index by subject). Includes documentary and experimental films, filmstrips, videotapes, slide shows, and distributors.

Betancourt, Jeanne. Women in Focus. 1974, Pflaum. From Cebco Standard Publishing, Fairfield, NJ 186p. $7.95 (hdbk), $5.95 (pbk).

In depth commentary on women filmmakers and annotations of individual films. Geared to high school teachers, and includes an index of films by theme to facilitate programming. Many still photos are used.

EDC (Education Development Center, Inc.), 39 Chapel Street, Newton, MA 02160.

Catalog of films and publications they distribute. Sample films: Girls at 12 by Joyce Chopra (30 min., color, rental; $25) and Women's Work: Engineering (26 min., color, rental; $30).

Froschl, Merle and Jane Williamson. Feminist Resources for Schools and Colleges: A Guide to Curricular Materials. 1977 rev. ed. Feminist Press, Box 334, Old Westbury, NY 11568. 67p. $1.95 (pbk).

A superb and well-organized guide. Everyone should have a handy copy of this book.

Racism and Sexism Resource Center for Educators, 1841 Broadway, New York, NY 10023.

Publish and distribute books, pamphlets, checklists and lesson plans dealing with racism and sexism in society. Also publish the Bulletin of the Council on Interracial Books for Children.

Resources for Counselors, Teachers and Administrators. Project on Sex Equality in Guidance Opportunities (SEGO), American Personnel and Guidance Association, 1607 New Hampshire Avenue, N.W., Washington, D.C. 20009. 11p. Single copy free.

Annotated bibliography covering curriculum, counseling, sex role socialization, reports of local school groups, and a resource list. Not as selective as the PEER bibliography, but a good overview.

Resources for Ending Sex Bias in the Schools. 1976. Project on Equal Education Rights (PEER), 1029 Vermont Avenue, N.W., Washington, D.C. 20005. 6p. Single copy free; $6/100 copies.

An excellent annotated bibliography with a good mix of resources on sex roles, women and work, bias in school texts or athletic programs, and how to use anti-discrimination laws. Materials range from K-high school and include many government publications.

SEX ROLES, MOTIVATION, AND SEX DIFFERENCES

Block, Jeanne H. "Conceptions of Sex Role: Some Cross-Cultural and Longitudinal Perspectives" American Psychologist (June 1973), p. 512-526.
Block places the acquisition of sexual identity in a developmental framework and describes a non-traditional view of sexual identity as a sense of self, and not the restricting socialization process as we know it.

_____. "Issues, Problems, and Pitfalls in Assessing Sex Differences: A Critical Review of The Psychology of Sex Differences" Merrill-Palmer Quarterly 22:4 (October 1976), p. 283-308.
"Readers seeking the state of knowledge regarding sex differences and sex similarities will find the Maccoby and Jacklin book a valuable entry point to the scientific literature, but they will need to be wary and discrimnating in accepting its conclusions." Block notes her objections and introduces alternative interpretations of the data.

Deaux, Kay. "Ahhh, She Was Just Lucky" Psychology Today 10:7 (December 1976) p. 70-75.
Short sketch of the author's experimentation with sex-linked tasks and attribution to luck or ability. She predicts that as women become more aware of life choices and expectations, they will opt for ability situations.

Dweck, Carol S. and Ellen S. Bush. "Sex Differences in Learned Helplessness: Differential Debilitation with Peer and Adult Evaluators" Developmental Psychology 12:2 (March 1976), p. 147-156.
In this experiment girls and boys reacted differently to failure feedback from adults and peers (girls' performance was sensitive to peers and boys to adults). The implications of failure attribution to lack of ability or to the evaluating agent are discussed.

Dwyer, Carol A. "Influence of Children's Sex Role Standards on Reading and Arithmetic Achievement" Journal of Educational Psychology 66:6 (December 1974), p. 811-816.
Results of testing middle class elementary and high school students suggested that differences in reading and arithmetic achievement were a function of the perceived sex-appropriateness or inappropriateness of the area.

Eliot, John and Jacqueline S. Fralley. "Sex Differences in Spatial Abilities" Young Children 31 (September 1976), p. 487-498.
Review of the research which concludes that many questions are still unanswered and urges developmental and longitudinal studies and a more precise classification system of "space."

Woman's Place Bookstore, 5251 Broadway, Oakland, CA 94618.
The source for materials (books, records, pamphlets, t-shirts, posters) produced by or about women. If you haven't been there, check it out.

Women's Studies Abstracts, P.O. Box 1, Rush, NY 14543. Quarterly, $7/student; $8.50/individual; $15/libraries.
Abstracts 200 articles per issue from over 600 academic, professional, and feminist publications plus book reviews and articles. Of particular interest: Jean D. Grambs "Sex-Stereotypes in Instructional Materials, Literature, and Language," 1:4 (Fall 1972), p. 1, 91-94; and Sara S. Whaley "Bibliography of Canadian and U.S. Resources on Women," 2:4 (Fall 1973), p. 1-6, 95-100 and Part II in 3:1 (Winter 1974), p. 1-4, 98-101.

Publishers of non-sexist books for children:

Send for catalogs for more information on topics and age levels. See Nancy Schimmel's column "Kids and Libraries" in Booklegger Magazine for more information. Back issues #1-16 are available at the LHS Science Education Library.

Canadian Women's Educational Press, 280 Bloor Street West, Suite 305, Toronto, Ontario, Canada. Adventure tales of Mandy and the Flying Map by Bev Allinson and The Travels of Ms. Beaver by Rosemary Allison.

Feminist Press, P.O. Box 334, Old Westbury, NY 11568. Some of the first attempts at non-sexist stories like Firegirl by Gibson Rich, A Train for Jane by Norma Klein and the budding scientist Coleen the Question Girl by Arlie Hochschild.

Learn Me, Inc., 642 Grand Avenue, St. Paul, MN 55105. They produce a catalog of books and materials distributed, including Children's Dictionary of Occupations and My Career Workbook.

Lollipop Power, Inc., P.O. Box 1171, Chapel Hill, NC 27514. The intrepid penguin Carlotta and the Scientist by Patricia Lenthall; Grownups Cry Too by Nancy Hazen.

New Seed Press, P.O. Box 3016, Stanford, CA 94305. Peter Learns to Crochet and Fanshen the Magic Bear solves a problem.

Maccoby, Eleanor E. and Carol N. Jacklin. The Psychology of Sex Differences. 1974, Stanford University Press. 634p. $18.95 (hdbk).

Attempts to evaluate what research has been done on sex differences in intellect and achievement, differential socialization and sex-typing of boys and girls. Includes a massive annotated bibliography p. 395-627, concentrating on reports of experiments found in academic journals.

Motta, Robert W. and Julia R. Vane. "An Investigation of Teacher Perceptions of Sex-Typed Behaviors" Journal of Educational Research 69:10 (July-August 1976), p. 363-368.

Boys and girls were rated by teachers on creativity, aggression, dependence, and achievement orientation, with girls consistently rated more dependent and boys more aggressive.

Psychology of Women: A Quarterly. Publication of a division of the American Psychological Association. From Human Sciences Press, 72 Fifth Avenue, New York, NY 10011. $30/yr., individual and student rates on request.

An academic journal which gives a good feel for the topics and trends in current research. Issue 1:1 (Fall 1976) includes "The Role of Models in Women's Professional Development" by Elizabeth Douvan, "Girls Who Perceive Themselves as Competent" by Grace Baruch about 5th and 10th grade girls, and "Sources of Sex Discrimination in Educational Systems: A Conceptual Model" by Nancy Kutner and Donna Brogan.

Issue 1:3 (Spring 1977) is devoted to women and achievement motivation. Articles of particular interest are "Parental Warmth and Hostility as Related to Sex Differences in Children's Achievement Orientation" by Rebecca Manley, and "Sex-Related Differences in the Development of the Motive to Avoid Success, Sex Role Identity, and Performance in Competence and NonCompetence Conditions" by Nancy Romer.

Salzman, Freda. "Are Sex Roles Biologically Determined?" Science for the People 9:4 (July-August 1977), p. 27-32.

A radical critique of sociobiology (the author compares it to Social Darwinism) and the research dealing with the effect of sex hormones on the brain.

School Review 80:2 (February 1972). Special issue on psychological and sociological research on sex differences. Edited by Jerome Kagan and Michael Lewis.

Contains many interesting articles such as "From Each According to Her Ability" by Diana Baumrind, "Emergence of Sex Differences" by Kagan, "Determinants of Intellectual Growth in Women" by David Lynn and "The Schooling of Tomorrow's Women" by Patricia Minuchin.

Fairweather, Hugh. "Sex Differences in Cognition" Cognition 4:3 (September 1976), p. 231-280.
Exhaustive review of sex differences in cognitive skills (motor, spatial, and linguistic) and the current interest in laterality. The author concludes that there are few convincing sex differences and criticizes most of the research which has been done as "ill-thought and ill-performed."

Garai, Josef E. and Amram Scheinfeld. "Sex Differences in Mental and Behavioral Traits" Genetic Psychology Monographs 77 (1968), p. 169-299.
Attempts to analyze sex differences in abilities and interests and to separate the genetic from the environmental factors. For a critique of this article as sexist, see Olga Favreau "Sex Bias in Psychological Research," Canadian Psychological Review 18:1 (January 1977), p. 56-65.

Gould, Lois. "X: A Fabulous Child's Story" Ms. 1:6 (December 1972). Also in The Forty-Nine Percent Majority: The Male Sex Role (Addison-Wesley 1976), p. 321-330.
A chromosome comedy and consciousness-raiser about sex typing that is fun to read.

Hoffman, Lois W., Martha Shuch Mednick and Sandra Schwartz Tangri. Women and Achievement: Social and Motivational Analyses. 1975, Hemisphere Publishing Corporation, distributed by Halsted Press/John Wiley. 447p. $19.95 (hdbk).
An intriguing collection of articles. For an overview, read Inge K. Broverman's "Sex-Role Stereotypes: A Current Appraisal" and Julia K. Sherman's "Summary of Psychological Sex Differences." For a variety of views on motivation and attribution theory, see Matina Horner's "Toward An Understanding of Achievement-Related Conflicts in Women," Irene H. Frieze's "Women's Expectations for and Causal Attribution of Success and Failure," Lois W. Hoffman's "Early Childhood Experiences and Women's Achievement Motives" and "Fear of Success in Males and Females: 1965 and 1971," and Aletha H. Stein and Margaret M. Bailey's "The Socialization of Achievement Motivation in Females."

Horner, Matina. "Women's Will to Fail" Psychology Today 3:6 (November 1969), p. 36-42.
Popular version of her research on women's fear of success.

Journal of Social Issues 28:2 (February 1972)
Special issue on women edited by Martha Mednick and Sandra Tangri. Includes articles by Broverman, Horner, Ravenna Helson, and others.

Kagan, Jerome. "Acquisition and Significance of Sex Typing and Sex Role Identity," Review of Child Development Research, Vol. 1 (eds. Martin L. and Lois W. Hoffman, 1964, Russell Sage Foundation) p. 137-167.
Emphasizes the arbitrary nature of sex role standards in society and the individual motivation to match that standard.

SEX DIFFERENCES IN MATH ACHIEVEMENT AND ATTITUDES

Aiken, Lewis R., Jr. "Update on Attitudes and Other Affective Variables in Learning Mathematics" Review of Educational Research 46:2 (Spring 1976), p. 292-311.
Detailed review of research on the development of student and teacher attitudes toward math, sex differences in attitudes, and emphasis on the dynamic interaction between attitude and math ability.

Arithmetic Teacher 24:5 (May 1977). Features three relevant articles:

"Sexual Stereotyping and Mathematics Learning" by Elizabeth Fennema and Julia A. Sherman. Math is still perceived as a male domain; women don't achieve as well and tend not to elect to study math to the same degree. Examines causal factors of parents, peers, and internalized fears.

"Update on Sex-Role Stereotyping in Elementary Mathematics Textbooks" by Helen F. Kuhnke. Author examined two sets of math texts K-6 and found that an effort had been made by publishers to eliminate sexist bias and stereotyping.

"Sex Roles in Mathematics: A Study of the Status of Sex Stereotypes in Elementary Mathematics Texts" by Henry S. Kepner, Jr. and Lilane R. Koehn. Examination of texts from 8 publishers on 1st, 4th and 7th grade levels, found sexism still in evidence, greater representation of males in number and more active roles and in diversity of occupations. A look at three revised texts revealed an increased use of sex-neutral language, expanded range of female occupations, and a shift in problems to more female representation. Urges continued teacher awareness and involvement.

Association for Women in Mathematics Newsletter, Department of Mathematics, Wellesley College, Wellesley, MA 02181.
Includes news and opinion statements, job listings, articles on women in mathematics, both past and present.

ERIC/SMEAC (Science, Mathematics and Environmental Education Information Analysis Center) Information Reference Center, 1200 Chambers Rd., Ohio State University, Columbus, OH 43212.
Division of ERIC which collects and disseminates material on science and math education, much of it previously unpublished.

Ernest, John. Mathematics and Sex. 1976, Math Department, University of California, Santa Barbara, CA 93106. 30p. Single copy free.
This small pamphlet is packed with statistical information and evaluation, as well as with concern and determination. Covers student and teacher attitudes, sex differences in math training at high school and university levels, women in the math profession, and recommendations (particularly for equality in career goals for males and females).

Sex Roles. Plenum Publishing Corporation, 227 W. 17th Street, New York, NY 10011. Monthly, $54/yr., $19/individual.

Another academic journal offering a diverse selection of research reports. Issue 3:2 (April 1977) has particularly relevant articles such as "Experimental Design as a Source of Sex Bias in Social Psychology" by Wendy McKenna and Susanne Kessler, "Sex Differences in Assertive Achievement Patterns" by Terry Hedrick and June Chance which studies 6th grade math and social studies class behavior, and "Children's Sex-Role Preferences: Stronger Among Girls Than Boys" by Louise Silvera.

Waber, Deborah P. "Sex Differences in Mental Abilities, Hemispheric Lateralization, and Rate of Physical Growth at Adolescence" Developmental Psychology 13:1 (1977), p. 29-38.

Proposes a biological determinant of sex differences and connects verbal and spatial abilities with sex differences in rates of maturation and lateralization.

Witkin, H.A., C.A. Moore, D.R. Goodenough and P.W. Cox. "Field-Dependent and Field-Independent Cognitive Styles and Their Educational Implications" Review of Educational Research 47:1 (Winter 1977), p. 1-64.

Offers a summary of cognitive styles, field-dependent/independent research, and a rationale for applying this research to how students learn, teachers teach, and both can better interact.

Lazarus, Mitchell. "Mathophobia: Some Personal Speculations" National Elementary Principal 53:2 (Jan-Feb 1974), p. 16-22. Also, Adeline Naiman "Memoirs of a Female Mathophobe " p. 23-24.
The many manifestations of mathophobia including the curious casualness with which people accept it and proclaim their inability to learn and how parents and schools may foster this attitude. "Inherent in mathematics is a particular quality of beauty, a sense of harmony and 'thusness' immensely satisfying to the mind. This is the fascination of mathematics. This is what mathophobia takes away."

_____. "The Mathematical Arts," EDC News #8 (Fall 1976), p. 8.
A lucid plea for teaching of "mathematical arts," through concepts such as rates of change and mathematical modeling, to make a connection between math and reality for the student.

Mitzman, Barry. "Seeking a Cure for Mathephobia" American Education 12:2 (March 1976), p. 10-14.
Description of the Oregon System in Mathematics Education's math lab approach and a typical workshop to cure teachers, as well as students, of mathephobia.

_____. Math Learning Center report on "Women and Math", Spring 1977. The Math Learning Center, 325 13th Street, N.E., Room 302, Salem, OR 97301. 6p. Single copy free.
Summary of math as a "critical filter" and brief notes on programs successful in broadening student and teacher attitudes (including those at the Lawrence Hall of Science).

Rogers, Margaret A. "A Different Look at Word Problems--Even Mathematics Texts Are Sexist" Mathematics Teacher 68:4 (April 1975), p. 285-288.
Examination of second year algebra texts by the usual criteria of sex-linked activities and occupations, generic language, etc. Men are found to be active in finance, sports, travel; while women excel in sitting and spending.

Sherman, Julia and Elizabeth Fennema. "The Study of Mathematics by High School Girls and Boys: Related Variables" American Educational Research Journal 14:2 (Spring 1977), p. 159-168.
Study comparing 10th and 11th grade females and males enrolled in math classes on their intent to take additional math, and related cognitive and affective variables. More males (especially in the lower half of the classes) than females intended to study math.

Fennema, Elizabeth. "Mathematics Learning and the Sexes: A Review" Journal for Research in Mathematics Education 5:3 (May 1974), p. 126-139.
Reports on 36 studies done since 1960 involving preschool through high school students, with the idea that if sex differences do exist, the math education profession has a responsibility to provide teacher training to enable all students to fulfill cognitive potential. Concludes that the review "has raised more questions than it answered" because of the many variables and age groups involved.

Fennema, Elizabeth and Julia Sherman. "Sex-Related Differences in Mathematics Achievement, Spatial Visualization and Affective Factors" American Educational Research Journal 14:1 (Winter 1977), p. 51-71.
Review of relevant literature and description of the population and variables studied in the National Science Foundation funded research on high school math-taking (see Sherman, Julia).

Guay, Roland B. and Ernest D. McDaniel. "The Relationship Between Mathematics Achievement and Spatial Abilities Among Elementary School Children" Journal for Research in Mathematics Education 8:3 (May 1977), p. 211-215.
Investigation of the relation between elementary school math achievement and high and low-level spatial abilities. Found that high math achievers had greater spatial ability and that males had greater high-level ability, though males and females had similar low-level spatial ability.

Hilton, Thomas L. and Gosta W. Berglund. "Sex Differences in Mathematics Achievement: A Longitudinal Study" Journal of Educational Research 67:5 (January 1974), p. 231-237.
A group of 5th grade students were tested in 1961 and then again in 7th, 9th and 11th grades using STEP and SCAT tests. In grade 5, no differences emerged in math achievement of boys and girls. Thereafter, the boys pulled ahead and differed as to interest in math and perception of math as useful in earning a living.

Jay, Winifred T. and Clarence W. Schminke. "Sex Bias in Elementary School Mathematics Texts" Arithmetic Teacher (March 1975), p. 242-246.
Using four criteria (classification of problems as masculine, feminine, or neutral; famous men to famous women represented; male:female occupations; and degree of stereotyped roles) authors found a degree of sex stereotyping and suggest supplementary activities to foster role reversal and equal career aspirations.

Keating, Daniel P., ed. Intellectual Talent: Research and Development. 1976, Johns Hopkins University Press. 346p. $3.95 (pbk).
Proceedings of a symposium on early childhood education. Contributors deal with identification, facilitation, and the psychology of intellectual talent. See Lynn Fox "Sex Differences in Mathematical Precocity: Bridging the Gap" and "Career-Related Interests of Adolescent Boys and Girls" reporting strong interest in math and science by gifted girls.

WOMEN MATHEMATICIANS IN HISTORY

Kennedy, Hubert C. "The Witch of Agnesi - Exorcised" Mathematics Teacher (October 1969), p. 480-482.
Attempts to sort out the fact and fiction about Maria Agnesi (1718-1799).

Kimberling, Clark H. "Emmy Noether" American Mathematical Monthly 79 (1972), p. 136-149.
The story of Noether's life and work supplemented by "unearthed correspondence of Cantor, Frobenius, Dedekind, and Weber which had been stored in a Philadelphia law office for 33 years" (Math Association of America Annotated Bibliography).

Osen, Lynn. Women in Mathematics. 1974, M.I.T. Press. 185p. $10 (hdbk), $4.95 (pbk).
Separate chapters on eight important women in the history of mathematics include Hypatia, Caroline Herschel, Mary Somerville, and Emmy Noether. "The Golden Age of Mathematics" recounts important events in the 1970's (the organization of the Association for Women in Mathematics, for example) and briefly cites 20th century women like Maria Goeppert Mayer and Lise Meitner. "The Feminine Mathtique" exposes psychological and sociological myths about women and math, corresponding inequalities in salary and opportunity, and encourages women to aspire.

Perl, Teri. "The Ladies' Diary...Circa 1700" Mathematics Teacher (April 1977), p. 354-358.
The history of the 18th century journal for women, the Ladies' Diary, and some sample puzzles and problems.

Watson, Jane M. "Three Women of Mathematics" Australian Mathematics Teacher 30:5 (October 1974), p. 153-160.
Short sketches of Hypatia, Maria Agnesi and Emmy Noether and something about their actual computations.

"Women of Mathematics," Mathematics Teacher 63:4 (April 1970), p. 329-337.
Brief biographies of Hypatia, Maria Agnesi, Sophie Germain, Sonya Kovalevsky and Emmy Noether. "Women of mathematics - indeed their number has been few, but their work has been fine."

Stanley, Julian C., Daniel P. Keating and Lynn H. Fox, eds. Mathematical Talent: Discovery, Description and Development. 1974, Johns Hopkins University Press. 215p. $2.95 (pbk).

Proceedings of a symposium dealing with the Study of Mathematically and Scientifically Precocious Youth project at Johns Hopkins. "Sex Differences in Mathematical and Scientific Precocity" by Helen S. Astin conveniently sums up the literature, while Lynn Fox and Susanne Denham's "Values and Career Interests of Mathematically and Scientifically Precocious Youth" supplies information on motivation of gifted girls.

Suydam, Marilyn N. A Categorized Listing of Research on Mathematics Education (K-12) 1964-1973. 1974. From ERIC/Science, Mathematics and Environmental Education Information Analysis Center, 1200 Chambers Rd., Ohio State University, Columbus, OH 43212. 358p. $6.50 (pbk).

Includes articles and dissertations on elementary and secondary school mathematics, math teacher education research.

Tobias, Sheila. "Math Anxiety" Ms. 5:3 (September 1976), p. 56-59+.

An introductory article on math avoidance summarizing the research of Lucy Sells and John Ernest, with accounts of the Math Anxiety Clinic at Wesleyan University and Lenore Blum's work at Mills College.

Tobin, Dianne, Linda Brody and Lynn H. Fox. The Effects of Sex Role Socialization on Mathematics Participation and Achievement Annotations. December 1976. Prepared for Career Awareness Division, National Institute of Education.

Lengthy abstracts of journal articles, books and papers dealing with research on math and sex differentiation. Very thorough job.

Majchrzak, Shirley. Preparing Young Women for Tomorrow: A Handbook of Career Counseling Strategies for Intermediate and High School Women. 1976, Monograph #9. California Personnel and Guidance Association, 654 E. Commonwealth Avenue, Fullerton, CA 92631. 95p. $5.50 (pbk).

Vocational readiness program in three units: the marriage game (given 10 profiles and chance factors, what can you do in this situation); discussion of statistics and other handouts on the job market, apprenticeship, etc.; and use of the Sleeping Beauty transactional script. Cynthia Epstein's useful essay "Bringing Women In" is reprinted. Helpful strategies are outlined for expanding career options: organizing student awareness groups, locating sex-fair career guidance inventories, developing school-community cooperative activities, in-service training for staff. Comprehensive resource list p. 65-93 of books, films, organizations.

Oliver, Laurel W. "Counseling Implications of Recent Research on Women" Personnel and Guidance Journal 53:6 (February 1975), p. 430-436.

Excellent guide for counselors. Summarizes developments in four areas: counselor bias, demographic changes in lives of women, sex differences, and sex role sterotypes; and offers nicely formulated suggestions for effective action.

Peden, Irene C. "The Missing Half of Our Technical Potential: Can We Motivate the Girls?" Mathematics Teacher 58:1 (January 1965), p. 2-13.

Lively talk by an electrical engineering professor who discusses the field of engineering for women, how she herself was influenced, and gives advice for encouraging girls who are gifted in math.

Pietrofessa, John and Nancy K. Schlossberg. "Perspectives on Counselor Bias: Implications for Counselor Education" Counseling Psychologist 4:1 (1973), p. 44-53.

Documents the effect of counselor attitudes in the counseling interview, bias in test instruments, and how positive and negative bias statements are directed differentially to males and females. A training model for teachers and counselors is proposed to alleviate sex bias.

Prediger, Dale J. and Nancy S. Cole. Sex Role Socialization and Employment Realities: Implications for Vocational Interest Measures Report #68 (January 1975). American College Testing Program, P.O. Box 168, Iowa City, IA 52240. 10p. $1.

Examines methods of reporting vocational interest measures, which ones reflect sex stereotypes, and the problems of using current employment distribution as a criteria for interest patterns.

Schlossberg, Nancy K. and Jane Goodman. "A Woman's Place: Children's Sex Stereotyping of Occupations" Vocational Guidance Quarterly 20:4 (June 1972), p. 266-270.

Study of K-6th graders who clearly held stereotyped views of men's and women's work reflecting the society.

SEX-FAIR COUNSELING

Astin, Helen S. "Career Development of Girls During the High School Years" Journal of Counseling Psychology 15:6 (1968), p. 536-540.
This study attempted to identify personality characteristics of 9th grade girls that would predict their vocational choices at the 12th grade level. Factors such as socio-economic status, the size of school, and amount of previous career counseling were also studied.

_____. "Stability and Change in the Career Plans of Ninth Grade Girls" Personnel and Guidance Journal (June 1968), p. 961-966.
The Project Talent Data Bank was used to study changes in career plans of girls between 9th grade and one year after high school. Five career groups (one was Natural Sciences) were examined through aptitude and interest measures.

Gardner, Joann. "Sexist Counseling Must Stop" Personnel and Guidance Journal 49:9 (May 1971), p. 704-714. Available as a reprint from KNOW, Inc.
Demands a change in counselor perspective, listing personal qualities and knowledge about women an "ideal" counselor would have. Specific parallels are drawn between women and ethnic minorities as oppressed groups, and some Rogerian strategies are suggested.

Guttman, Mary A. Julius. "Counseling Biases and Practices in Counseling Females: Implications for Training the Non-Sexist Counselor" in Women and ACES: Perspectives and Issues. (1974, Association for Counselor Education. From Accelerated Development, Inc., P.O. Box 667, Muncie, IN 47305). p. 31-41.
Reviews the literature on counselor attitudes and bias in career-planning practices, counselor expertise about women and work, and sexism in counseling materials.

Harris, Sandra R. "Sex Typing in Girls' Career Choices: A Challenge to Counselors" Vocational Guidance Quarterly 23:2 (December 1974), p. 128-133.
Study in which group counseling sessions (6 30-minute meetings) were held with 6th grade girls in an effort to increase the range of tentative career choices and decrease the number of sex-typed choices. Results were encouraging, though clearly the classroom teacher is the primary role model for young girls and wider exposure, field trips, etc. are needed.

RESOURCES FOR COUNSELING

Abt Publications, 55 Wheeler Street, Cambridge, MA 02138.
Publish many packages of career exploration activities and simulation games. Sex Fairness in Career Guidance: A Learning Kit includes a manual, role playing cards, and cassette tape ($15 + $1.50 shipping, not previewed).

Advocates for Women, 256 Sutter Street, San Francisco, CA 94108.
A resource and action group which counsels women on job search techniques, maintains a bank of job listings, and runs an apprenticeship outreach program.

Business and Professional Women's Foundation. Career Counseling: New Perspectives for Women and Girls. 1972. From BPWF, 2012 Massachusetts Avenue, N.W., Washington, D.C. 20036. 44p. 50¢.
A selected, annotated bibliography of books, pamplets, articles, and microfilm on counseling, occupational choice, and specific careers.

Catalyst, 14 E. 60th Street, New York, NY 10028.
A series of career opportunity booklets covers 27 fields (counseling, engineering, environmental affairs) with information on the status of women, salaries and working conditions, and educational background or training required. Also publish bibliographies, case histories and profiles.

Center for Vocational and Technical Education, Ohio State University, 1960 Kenny Road, Columbus, OH 43210.
Publish many materials on women in the work force, career guidance and work patterns.

Change for Children, 532 Valencia Street, San Francisco, CA 94110.
Set of 20 8x10" photos of women and men at work in non-traditional jobs ($6).

Farmer, Helen S. and Thomas E. Backer. New Career Options for Women. 1977, Human Sciences Press, 72 Fifth Avenue, New York, NY 10011.
A three-part series: A Counselor's Sourcebook ($16.95 hdbk), A Woman's Guide ($4.95 pbk), and A Selected Annotated Bibliography ($9.95 hdbk). Not previewed.

Feminist Resources for Equal Education (FREE), P.O. Box 3185, Saxonville Station, Framingham, MA 01701.
Two sets of 8x10" photographs showing women working as Community Helpers and Professionals. $2/set (8 photos).

School Science and Mathematics 76:4 (April 1976).
Special issue on career education. Most of the articles are not outstanding, but a prime resource is Lynn Fox's "Women and the Career Relevance of Mathematics and Science" which recaps her work with academically talented girls. Covers predictors of future math taking, conflicts between choosing science or humanities, methods of acceleration and support.

Signs: Journal of Women in Culture and Society 1:3 Part 2 (Spring 1976 Supplement) University of Chicago Press.
Special issue. "Women and the Workplace: The Implications of Occupational Segregation" with essays on the social institutions, historical roots, and economic dimensions of occupational segregation,and a panel discussion.

Verheyden-Hilliard, Mary Ellen. "Counseling: Potential Superbomb Against Sexism" American Education 13:3 (April 1977), p. 12-15.
Essential article. "Nonsexist counseling theory, though important, will do little to eliminate sexist counseling practice unless it is translated into training programs. Counselor training, both preservice and inservice, must be restructured to include major components on the new psychology of women, the concept of androgyny, the reality of women's lives, and the changing woman in a changing world."

Women on Words and Images. Help Wanted: Sexism in Career Education Materials. 1975. From WOWI, P.O. Box 2163, Princeton, NJ 08540. 51p. $2.50 or $2 each/ 25 copies. 25 minute slide-tape show, rental: $35, sale: $300.
84 sets of career education materials (28 elementary/56 secondary) are evaluated with examples of different types given: materials showing stereotyped occupations dominated by males, those aimed at one sex only, those with tokenism, and those which attempt fairness. Careers broken down by sex yield an almost 5:2 ratio male to female. Includes checklists and suggestions to help teachers and counselors who have to use the available sexist materials. Devastating examples of "grooming" instructions for women only, use of the generic "he", and domination of filmstrip frames and narration by males abound.

APPRENTICESHIP AND SKILLED TRADES

Division of Apprenticeship Standards, Department of Industrial Relations, State of California. California Apprenticeship Information Guide. 1976. From Bureau of Apprenticeship Training, San Francisco Office, 450 Golden Gate Avenue, Room 1003, San Francisco, CA 94102. Free.

For each area of apprenticeship, describes the nature of the work, the tools used, working conditions and types of employers, and high school courses which would be helpful. Specific program information includes where and when to apply, minimum qualifications, conditions of participation, and the process of selecting candidates. Available for all California counties.

Division of Apprenticeship Standards. Directory of Organizations Promoting Equal Employment Opportunitities for Women. 1976. From above address. 56p.

For 30 counties, lists existing programs, contact people, and a brief description of the scope of the training offered.

Women's Bureau, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. Steps to Opening the Skilled Trades to Women. 1974. 8p.

A history of women's participation in the skilled trades with lists of steps employers must take to increase employment of women, how women workers can be better utilized, suggestions for training, supportive services and the role of unions; how women can accelerate their own entry, and brief descriptions of existing programs in the country.

Medsger, Betty. Women at Work. 1975, Sheed Andrews and McMeel. 212p. $14.95 (hdbk), $7.95 (pbk).

Black and white photographs of women in traditional and non-traditional occupations with quotes describing their work and lifestyle (includes Dr. Mary Gray, math professor, who says that one of her main concerns is helping teachers prevent math anxiety in girls). The wonderful range of jobs and slice of life revelations make an involving, experiential book.

Mitchell, Joyce Slayton. I Can Be Anything: Careers and Colleges for Young Women. 1975. From College Board Publication Orders, Box 2815, Princeton, NY 08540. 256p. $6.50 (hdbk), $4.50 (pbk).

Very useful and attractive work covering many careers, such as astronomer, chemist, engineer, environmental scientist, physicist, as well as welder, carpenter, electrician, stockbroker. Each entry tells what it is like to be in that field, what education is needed, how many women there are and where they work, salaries and future, what colleges award most bachelor's degrees to women in the field, and where to get more information. Reading list and addresses of schools and professsional organizations. Photos are action oriented and show the tools of the trade, with some minority group representation. On the cover is a smiling young mathematician in overalls at the Bell Labs.

Splaver, Sarah. Nontraditional Careers for Women. 1974, Julian Messner/Simon & Schuster. $6.25 (hdbk).

Description of over 500 careers for women. "Women in Math and Science," p. 128-148 and "Engineering Women Have Fast Growing Futures," p. 128-148. Defines the specialties within a field and who employs them, with supplementary survey data and future predictions. More detailed than Mitchell, but no photographs.

Women in Non-Traditional Occupations: A Bibliography. 1976, Office of Education, Bureau of Occupational and Adult Education, Washington, D.C. 20202. 189p.

Fantastic annotated bibliography including magazine and journal articles, books, pamphlets, government documents and dissertations published from 1970-June 1976. Divided into sections on non-traditional occupations; skilled, vocational occupations; and non-traditional occupations requiring a minimum of a baccalaureate degree. Non-traditional was defined as a field where women composed less than 38% (the 1970 Bureau of Census average proportion of women in the work force). Includes popular sources such as McCalls and Mademoiselle as well as professional and academic. Indexed by author, title, and subject/occupation.

Women's Work, 1302 18th Street, N.W., Suite 203, Washington, D.C. 20036. Bimonthly, $6/yr.

A non-profit publication devoted to women and their careers with profiles of successful women, interviews, book reviews, news and job listings.

Epstein, Cynthia F. "Encountering the Male Establishment: Sex-Status Limits on Women's Careers in the Professions" American Journal of Sociology 75 (1970), p. 965-982.
Dissects the characteristics of a profession which help keep women out: colleague system, sponsor/protegé set-up, informal interaction. Epstein interviewed successful women for suggestions on minimizing sex-status and sex roles.

_____. Woman's Place: Options and Limits in Professional Careers. 1970, University of California Press. 221p. $7.95 (hdbk), $2.45 (pbk).
Sociological perspective on women's roles, social structues that can help the professional avoid role strain or conflict, and more on the "club" context and status-sex typing.

Halsey, Susan D. et al, eds. Women in Geology. Monograph #5 of the Dept. of Geology and Geography, St. Lawrence University. 1976. From Ash Lad Press, P.O. Box 396, Canton, NY 13617. 81p. $2 plus postage.
Proceedings of the First Northeastern Women's Geoscientists conference are a little rough around the edges. Six role model papers reveal diverse influences (even a Girl Scout badge in rocks and minerals) and reactions to math anxiety. Geological papers presented by these women at the conference are also included.

Helson, Ravenna. "Women Mathematicians and the Creative Personality" Journal of Consulting and Clinical Psychology 36:2 (1971), p. 210-220. Also in Judith Bardwick, ed. Readings on the Psychology of Women, p. 93-100.
Survey of 45 women mathematicians (personalities, research style and background) to find out whether women really can possess "creative" traits.

Hubbard, Ruth. "Sexism in Science" Radcliffe Quarterly 62:1 (March 1976), p. 8-11.
"If women had constituted half the scientific work force since the time western science broke away from its medieval precursors, its structure and content would be different - it would have addressed different questions and probably found different answers." The debate over sociobiology continues.

Impact of Science on Society 25 (April-June 1975).
Special issue on "Women in Science: A Man's World." Articles on women in the work force, in academia, obstacles to women in science.

Kistiakowsky, Vera. Women in Engineering, Medicine and Science. From Commission on Human Resources, National Research Council, 2101 Constitution Avenue, N.W., Washington, D.C. 20418. 64p. Single copy free.
Women's enrollment and employment patterns, including 40 tables and charts.

WOMEN IN SCIENCE AND ENGINEERING

Arnold, Lois. "Marie Curie Was Great, But..." School Science and Mathematics (November 1975), p. 577-584.
A look at woman's place in science curriculum materials (has Marie Curie become a token?). Argues for portrayal of more young scientists, both male and female, and less emphasis on "great" contributors of the past.

Campbell, Margaret A. Why Would A Girl Go Into Medicine? 1973, 3rd. ed. Feminist Press. 114p. $3.50 (pbk).
Surveys discrimination (institutional, overt, and subtle) against women in U.S. medical schools and discusses methods of organizing and surviving. "Campbell" is a pseudonym and the real author is Mary Howell, former Associate Dean for Student Affairs at Harvard Medical School.

Eiduson, Bernice T. and Linda Beckman, eds. Science As A Career Choice. 1973, Russell Sage Foundation. 735p. $25 (hdbk).
82 articles on the psychology of the scientist: childhood and family influences, academic experiences, motivations, intellectual and personality strengths, choice of a discipline within the sciences. Part IV includes a section on alternate career patterns with "Personality Profiles of Gifted Women: Psychologists" by Louise M. Bachtold and Emmy E. Werner, "Minority Status and Pursuit of Professional Careers: Women in Science and Engineering" by Carolyn Perrucci, Ravenna Helson on creativity, and Martha White on barriers to women in science.

Emberlin, Diane. Contributions of Women - Science. 1977. Dillon Press, Minneapolis, MN 55415. 158p. $6.95 (hdbk). Series includes women in aviation, education, sports, etc. Recommended for grades 5-9.
Detailed stories of Annie Jump Cannon, Lillian Gilbreth, Margaret Mead, Rachel Carson, Ruth Patrick (ecologist and "river doctor"), Eugenie Clark (ichthyologist and shark authority) with short sketches of other women. From the enthusiastic introduction ending with a "question everything" quote by Maria Mitchell to the informative, lively lives, a "model" book.

Engineering as a Profession for Women, Bulletin #29 (April 1976). Engineering Manpower Commission of Engineers Joint Council, 345 E. 47th Street, New York, NY 10017. 6p. $2 each.
The current picture in engineering, what has kept women out in the past, the changing future, and lots of data.

Malcom , Shirley M., John Cownie and Janet W. Brown. Programs in Science for Minority Students 1960-1975. 1976. From AAAS, above address.
An inventory of programs in science for minority students (minority refers to racial or ethnic groups underrepresented in science and Asians were not included). 355 entries describing programs and listing contact people.

Mattfeld, Jacquelyn A. and Carol G. VanAken, eds. Women and the Scientific Professions. 1965, MIT Press. 250p. $6.95 (hdbk). 1976, Greenwood. $15.25.
Proceedings of the MIT Symposium on American Women in Science and Engineering. Most of the material is dated and fairly timid, plus a sexist keynote by Bruno Bettelheim. Alice Rossi's "Barriers to the Career Choice of Engineering, Medicine or Science Among American Women," p. 51-127 is packed with astute observations and data. She fears that re-entry programs will institutionalize the withdrawal of women from the workplace during childbearing years and that part-time work is a placebo. Summarizes research on the characteristics differentiating scientists (extreme independence, intense channeling of energy, and apartness from others).

Professional Women and Minorities: A Manpower Data Resource Service. 1977. Scientific Manpower Commission, 1776 Massachusetts Avenue, N.W., Washington, D.C. 20036. 320p. $40 (looseleaf binder).
A comprehensive data study on the availability of women and minorities for professional positions, including natural and social sciences and engineering.

Profile of the Woman Engineer. 1976. From Society of Women Engineers, United Engineering Center, Room 305, 345 East 47th Street, New York, NY 10017. 12p. Single copy free.
Includes basic information in summary and chart form on the typical woman engineer and her work. For example, 55% had only a bachelor's degree, 73% were employed full-time in engineering, the median income in 1973 was $15,200 and the median age 39.

Research Issues in the Employment of Women: Proceedings of a Workshop. 1975, National Academy of Sciences. From Commission on Human Resources, National Research Council, 2101 Constitution Avenue, N.W., Washington, D.C. 20418, 139p.
Papers presented by social scientists include: "Women in Science and Engineering: A Research Reivew," Cora Marrett; "Some Social Factors in Career Choice," Ellen Robin; "Personality Characteristics and Sex, in Science," Ravenna Helson; "Sex-Based Professional Socialization among Graduate Students in Science," Carolyn Perruci; and "Male Values and Female Professionals: Women in Science and Engineering" Deborah David. Marrett and Helson are particularly fine, and David offers an interesting, though pessimistic, view of engineering as a future for women.

Kreinberg, Nancy ed. I'm Madly in Love with Electricity and Other Comments About Their Work by Women in Science and Engineering. 1977. Lawrence Hall of Science, Attention: Careers; University of California, Berkeley, CA 94720. 37p. Single copy free.

Questionnaires were sent to 160 women scientists, engineers and mathematicians, and comments from 70 of them are integrated into the sections on math, engineering, physics, astronomy, chemistry and life sciences. Women in these fields give personal accounts of what they do and what opportunities exist for women. From the electrical orange and yellow cover to the list of 160 California resource people, an inspiring work. Also includes a comprehensive bibliography of publications and professional organizations.

Kundsin, Ruth ed. Women and Success: The Anatomy of Achievement. 1974, William Morrow. 256p. $8.95 (hdbk), $3.45 (pbk).

Compilation of papers presented at a 1972 N.Y. Academy of Sciences conference. Good introduction by Cynthia Epstein, "Bringing Women In," where she notes that successful women are usually "at the bottom of the top." Twelve individual life experiences of a mathematician, crystallographer, chemist, engineer, and others are disappointing. They don't really tell very much about what they do and talk more about their marriages and children. All seem to downplay the discrimination they faced expect for meteorologist Joanne Simpson and physicist Betsy Ancker-Johnson. Disorganized sections deal with education, economic factors, anddeterminants of success. An important essay is "Making It: Marginality and Obstacles to Minority Consciousness" by Arlie Hochschild.

Lubkin, Gloria B. "Women in Physics" Physics Today (April 1971), p. 23-27.

Why more women in physics are needed, how many exist, indicators of discrimination and those peculiar to physics, whether a built-in bias toward women offers a temporary solution, and other issues brought up in a panel discussion at a NY American Physical Society meeting.

McClure, Gail T. Women in Science and Technology: Careers for Today and Tomorrow. 1976, American College Testing Program. From ACT Publications, P.O. Box 168, Iowa City, IA 52240. 16p. $1.50

Encouraging source for career planning with photographs and quotes from working women. At the end, a well-stated list of suggestions: take yourself seriously, become an expert on yourself, learn what different careers require and prepare early, set your own goals, and take charge of your life!

Malcom, Shirley M., Paula Q. Hall and Janet W. Brown. The Double Bind: The Price of Being a Minority Women in Science. 1976. From American Association for the Advancement of Science, 1515 Massachusetts Avenue, N.W., Washington, D.C. 20005.

Report of a 1975 conference of minority women scientists. Topics investigated were precollege experience, professional education, career and professional experience, and diversity of race and culture, with recommendations. An appendix by Betty Vetter projects future opportunities and womanpower needs.

Teitz, Joyce. What's a Nice Girl Like You Doing in a Place Like This? 1972, Coward, McCann. 285p. $6.95 (hdbk).
Stories of 11 professional women include a Quaker physician, Dr. Marjorie Nelson; Sylvia Earle, oceanographer and diving record-setter; and Devrie S. Intriligator, physicist. The author describes herself as "reformist" and the perspective is hardly radical, but quite a bit of information on what these women do and the choices they made is included.

Tidball, M. Elizabeth and Vera Kistiakowsky. "Baccalaureate Origins of American Scientists and Scholars" Science 193:20 (August 1976), p. 646-652.
Authors found that the undergraduate institutions from which women go on to doctorates differ from those of men. The women were more likely to have graduated from institutions that enrolled large numbers of women, had a long history of women who attained doctorates, and offered strong academic preparation in several areas of study.

Vetter, Betty. "Women in the Natural Sciences" Signs 1:3 Part 1 (Spring 1976), p. 713-720.
Statistical analysis of women in specific science fields. Conclusion that the status of women in science is "about what it was five years ago, before 'affirmative action' was mandated by executive order." There have been some gains in the number of women graduates and those enrolled in graduate programs. Vetter predicts a long road to equal opportunity.

White, Martha S. "Psychological and Social Barriers to Women in Science" in Constantina Safilios-Rothschild, ed. Toward a Sociology of Women (1972, Xerox). p. 300-308. Also in Science 170 (1970).
White sees as a major barrier the expectation that every woman's career pattern and motivation will be the same as men's. Discusses the types of encouragement that may be withheld from women such as socialization into a profession by sponsorship or informal sharing of knowledge. Specific recommendations for creating a differentiated and diversified professional role for women.

WITS Program Options 1976-1977. From Work in Technology and Science (WITS), Room 20C-228, MIT, Cambridge, MA 02139. 24p.
This program grew out of the 1973 MIT conference on women in science and technology and aims to improve the education to work transition for young men and women. Activities include workshops on math, biology, chemistry, and physics; a seminar series on communicating career understanding; educational leadership seminars; and an exchange of personnel between school and workplace.

Womengineer. 1974. From Engineers' Council for Professional Development, 345 East 47th Street, New York, NY 10017. 16p. Single copy free.
A beautifully designed booklet with many photos and illustrations. The information on engineering and what it is like to be an engineering student is not detailed, but creates interest and emphasizes that engineering is not just for males.

Rossi, Alice S. "Women in Science: Why So Few?" in Constantina Safilios-Rothschild, ed. Toward a Sociology of Women (1972, Xerox). p. 141-153. Also in Science 148: (May-June 1965), p. 1196-1202.
An abbreviated version of the MIT paper with some new recommendations for increasing the number of women scientists.

Ruina, Edith, ed. Women in Science and Technology: A Report on an MIT Workshop. MIT Press. 39p. $2.
The workshop focused on the role of secondary schools and included segments on women and work today, the challenge to change for employers and schools, how the experts see the future for careers and counseling, and resources.

Schacher, Susan, ed. Hypatia's Sisters: Biographies of Women Scientists - Past and Present. 1976. From Feminists Northwest, 5038 Nicklas Place, N.E., Seattle, WA 98105. 72p. $2.
Biographical sketches of 17 women from 300 B.C. to the present, and notes on 23 others. Old standbys Marie Curie and Florence Nightingale, found women Aspasia and Jacoba Felicie, the fascinating Beatrix Potter and Ellen Swallow, and well known current figures like Jane Goodall. Illustrated and done with loving care.

Scientific, Engineering, Technical Manpower Comments. From Scientific Manpower Commission, 1776 Massachusetts Avenue, N.W., Washington, D.C. 20036 10x year, $20; single copy $2.
This small magazine, edited by Betty Vetter, is an excellent resource for current awareness. Topics reported include salary and employment patterns, legislation and government funding, government agency developments, college and university activity and notices of publications and conferences. Packed with information in an unpretentious format.

Schilling, Gerhard F. and Kathleen Hunt. Women in Science and Technology: U.S./U.S.S.R. Comparisons. 1974, Rand Corporation. 67p. $5 (pbk).
Assessment of the relative role and utilization of women in science and technology in the two countries. Statistical tables and a bibliography.

Space for Women: Perspectives on Careers in Science. 1977. From Public Affairs Office, Harvard-Smithsonian Center for Astrophysics, 60 Garden Street, Cambridge, MA 02138. 46p. Single copy free.
A very attractive booklet geared to high school and college students, though it would be fine for intermediate also. What it is like to be a scientist, problems of discrimination real and imagined, specific careers in astrophysics. Not a detailed treatment, but creates interest and awareness, with photos and many role models.

Zinn, Mary F. "Women in Science: Why Not?" Journal of College Science Teaching 6:3 (January 1977), p. 143-148.

Detailed description of two 7-week modules developed at Oberlin to explore the question of why women seldom train for high-level scientific careers and why science does not concern itself with active recruitment of women. Part I on "Women in the Sciences: Career Choices and Outcomes" (includes a discussion of the "superwomen" portrayed in Kundsin's Women and Success). Part II on "Women in Science: Contemporary Challenges and Achievements."